Keep-it-Easy ECG System

User Manual

Edition: Ver1.0

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Notice

Thank you for purchasing the **Keep-it-Easy ECG System** software which is the data management software for our ECG monitor. Before use, please read this manual carefully.

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1. General Introduction

Keep-it-Easy ECG System is the application software running on a computer in conjunction with the handheld ECG monitor. You can use the software on your computer to analyze, display, replay, export, import and print data transferred from the ECG monitor.

2. Requirements for Running Keep-it-Easy ECG System

To run the Keep-it-Easy ECG System, your computer requires a hardware configuration with a minimum of PIII500 CPU, 64M internal memory, CD-ROM drive, a minimum of a 10G hard disc.

Requirement for Operating System:

Microsoft Windows 2000/XP/Vista operating system.

3. Installation

3.1 Insert the attached installation CD into your computer's CD-ROM driver.

3.2 Single click the "setup.exe" files to access the installing interface as in Fig.3-1.

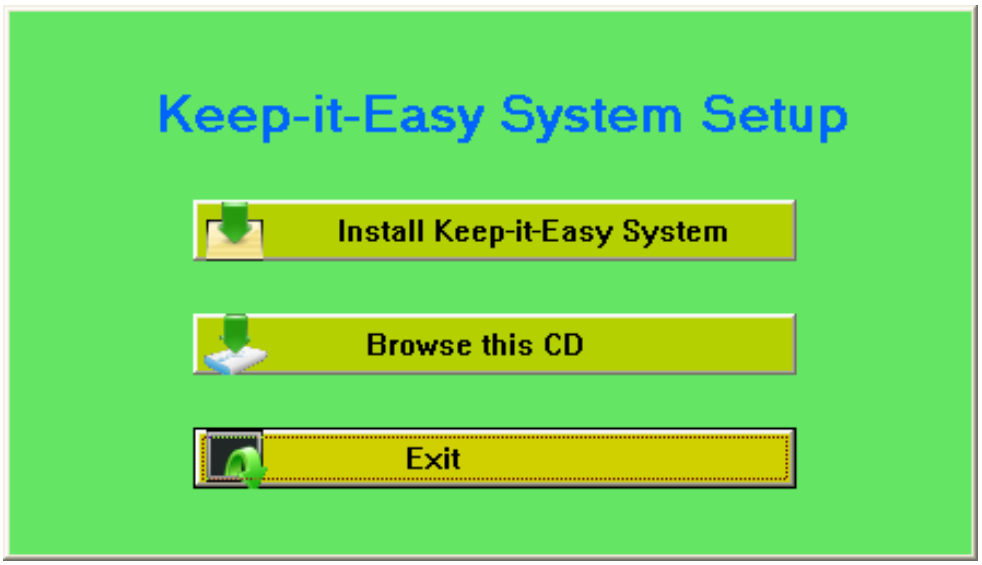

Fig.3-1

3.3 Click the "**Install Keep-it-Easy ECG System**" button to install the software. Refer to steps 3.3.1 ~3.3.6 for installation instructions:

3.3.1

Fig.3-2 Click “Next>”

3.3.2

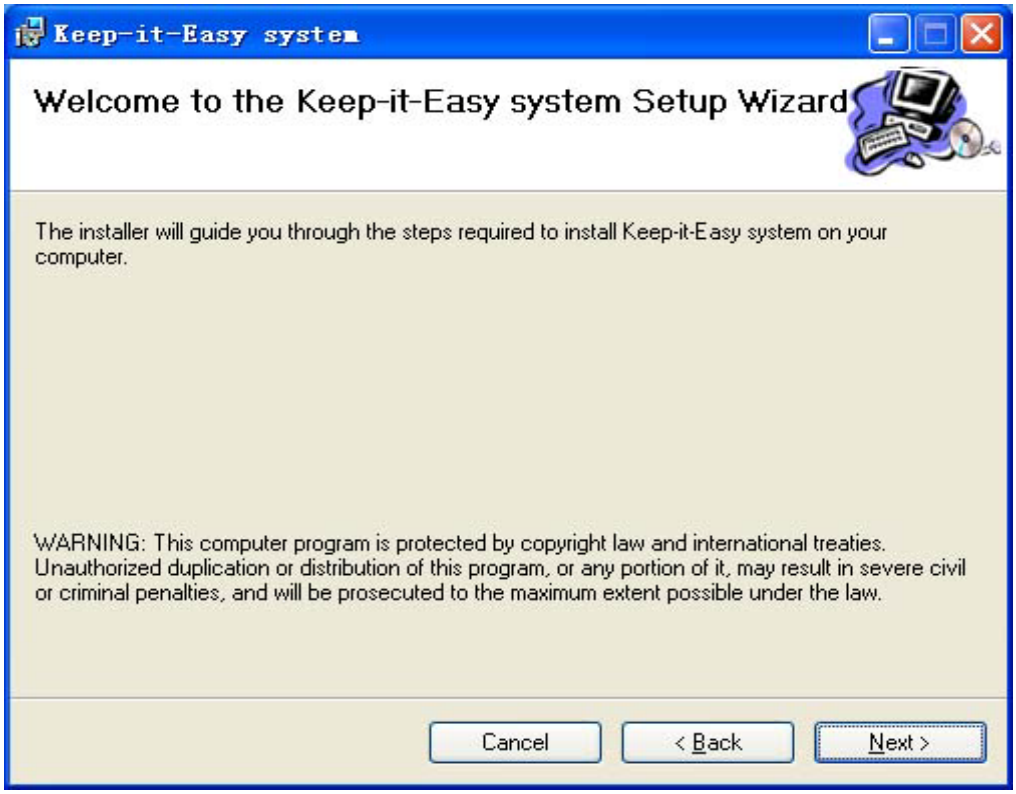
Keep-it-Easy system
Welcome to the Keep-it-Easy system Setup Wizard
The installer will guide you through the steps required to install Keep-it-Easy system on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >

Fig.3-3 Click “Next>”

3.3.3

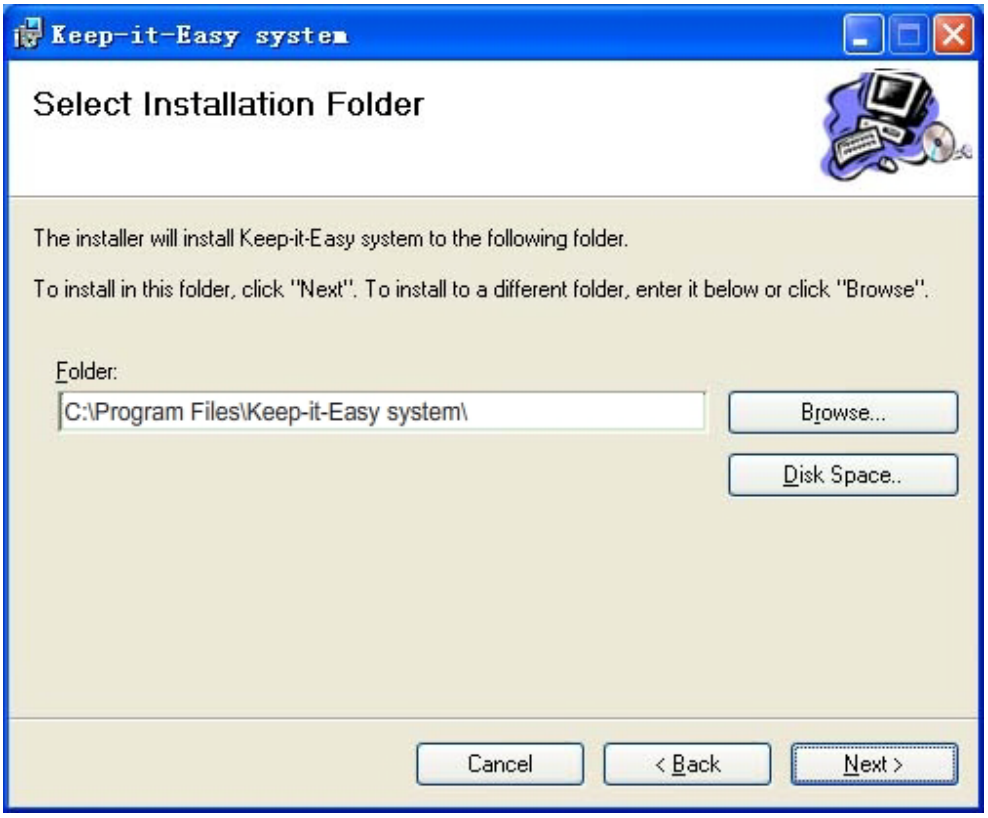
Keep-it-Easy system
Select Installation Folder
The installer will install Keep-it-Easy system to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files\Keep-it-Easy system\
Browse...
Disk Space..
Cancel
< Back
Next >

Fig.3-4 Click “Next>”

3.3.4

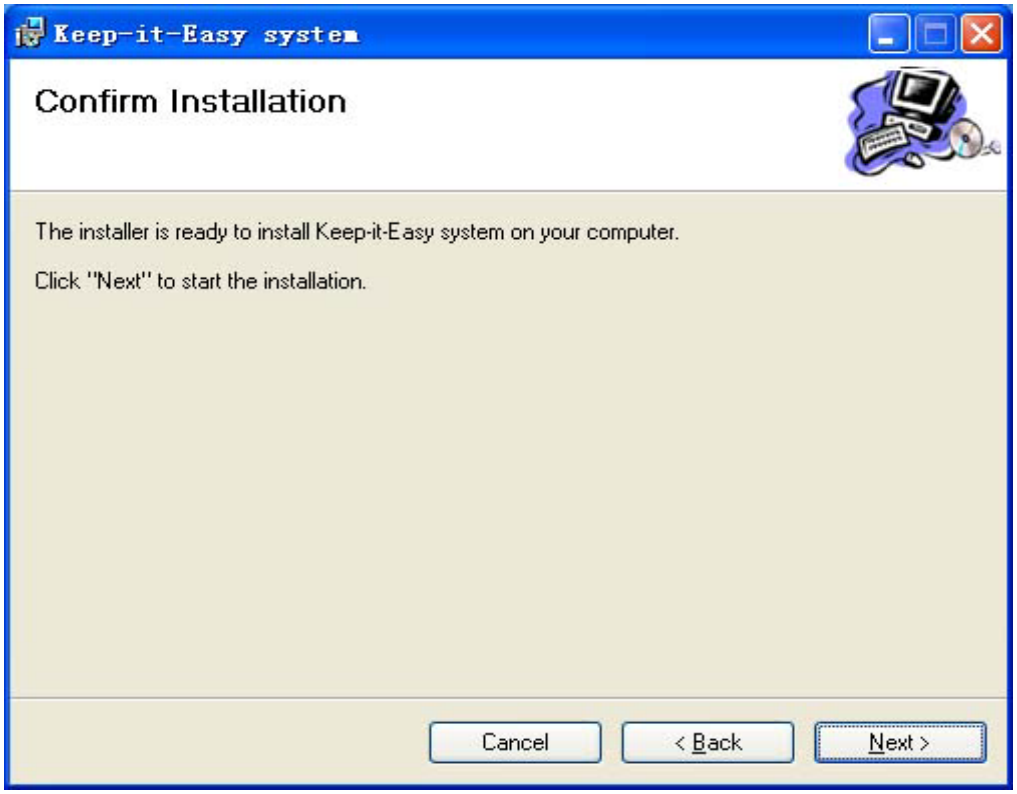
Keep-it-Easy system
Confirm Installation
The installer is ready to install Keep-it-Easy system on your computer.
Click "Next" to start the installation.
Cancel
< Back
Next >

Fig.3-5 Click “Next>”

3.3.5

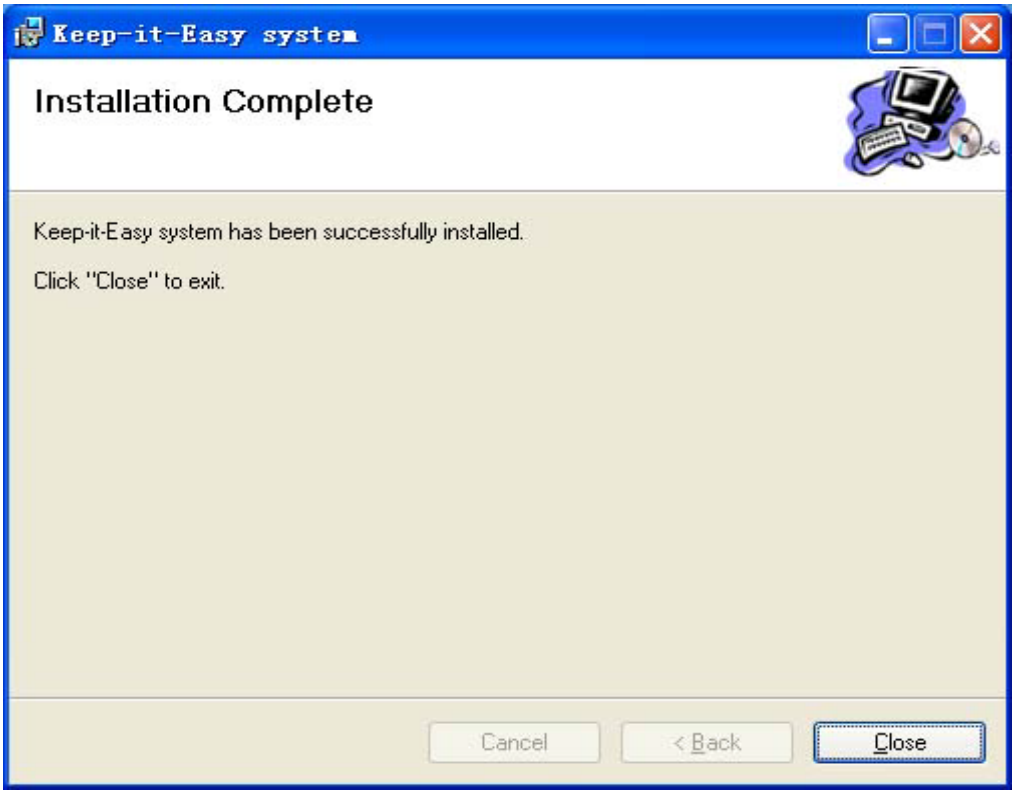

Fig.3-6 Click “Close

In the interface as in Fig.3-6 click the “Close” on to finish the installation steps.

3.3.6 After finishing installation of the software, a shortcut icon “Keep-it-Easy ECG System” will appear on your computer’s desktop, refer to Fig.3-7. You can run it by double-clicking the shortcut icon or by clicking the “Keep-it-Easy ECG System” menu item in the “Start” menu of your PC.

Fig. 3-7

4. Software Operation

The Keep-it-Easy ECG System is the application software running on a computer together with the ECG monitor. It will only allow one ECG monitor to be connected to the computer for data transmission at a time.

You can use the software for reviewing and analyzing data that was previously uploaded to it without having an ECG monitor attached to your computer.

The required computer resolution is 1024×768 or higher.

4.1 Main menu

Double-click the “Keep-it-Easy ECG System” icon to run the software; the main menu will be displayed as shown in Fig. 4-1.

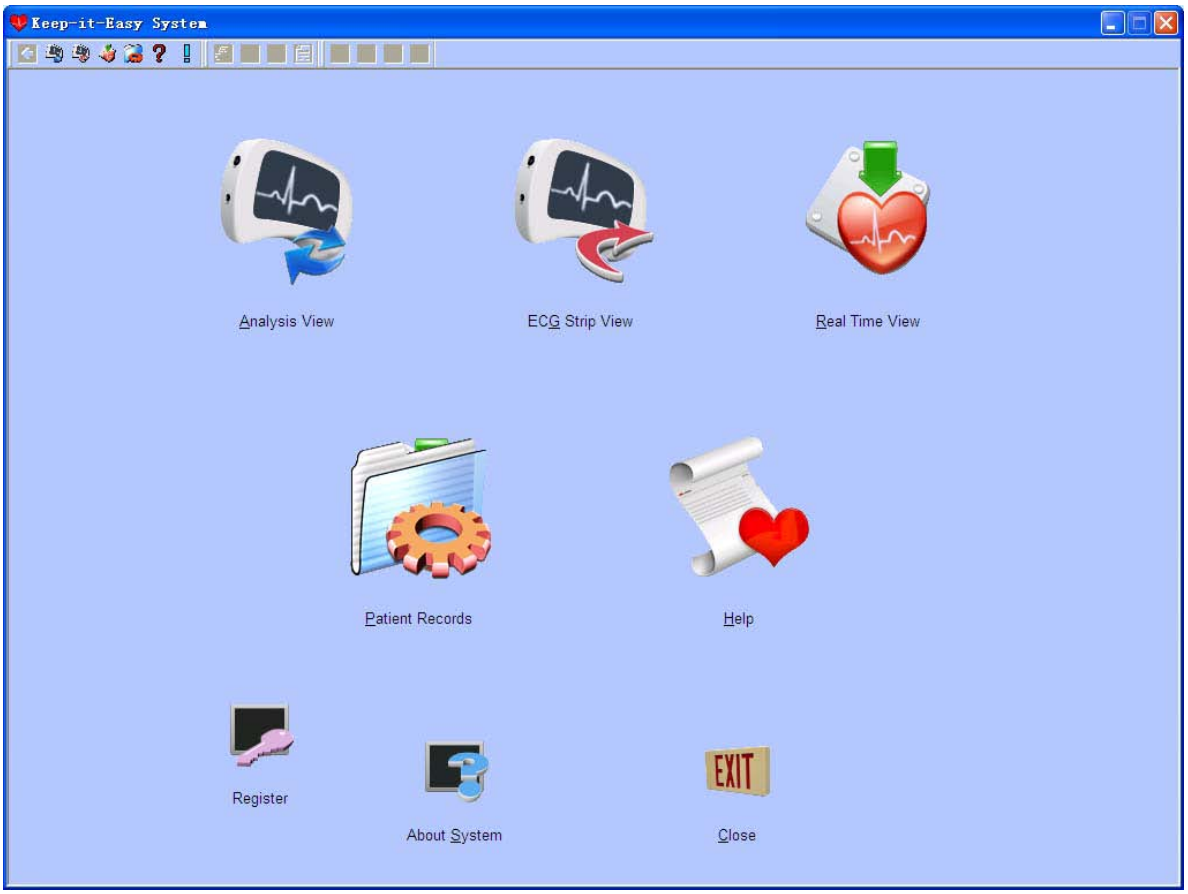

Fig. 4-1

Description of Fig. 4-1:

： Analysis View

By accessing this menu item, you can review data and waveform in continuous measurement mode.

： ECG Strip View

By accessing this menu item, you can review data and waveform in easy mode.

： Real Time View

By accessing this menu item, you can view real-time data and waveform.

： Patient Records

By accessing this menu item, you can manage patients’ records.

： Help

By accessing this menu item, you can learn some general ECG knowledge.

： Register (Optional)

By accessing this menu item, you can activate the function of the analysis of arrhythmia type by inputting correct register code.

： About System

By accessing this menu item, you can get some information about the software system.

： Close

By clicking the “Close” icon, you will exit from the software system.

4.2 Main Functions Introduction

4.2.1 Patient Records

Click the icon in the main menu, the window displayed in Fig. 4-2 will pop up. In this window, the user can modify the patient’s information including name, gender and birth date and so on, but the patient ID cannot be modified. The user can also delete any existing patient’s information and add new ones.

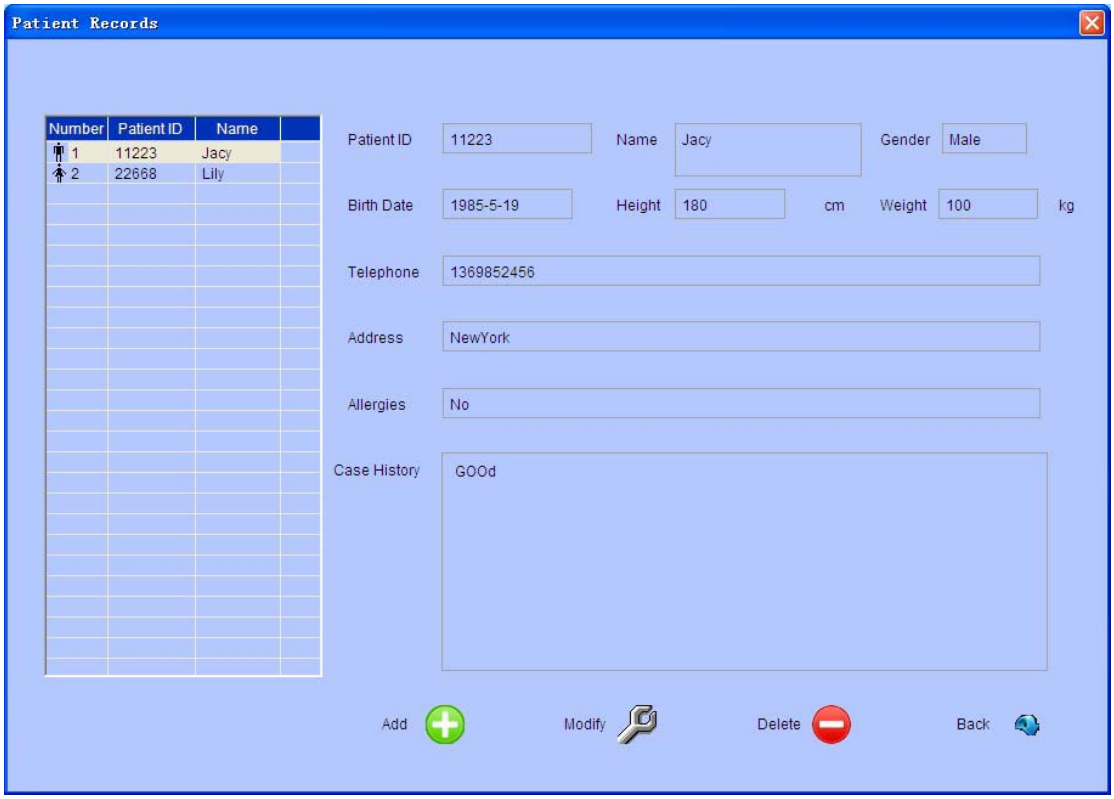

Fig. 4-2

Screen Description:

On the Patient Records screen, the user can modify and delete any existing patient information as well as add new ones. The table on the left area of the screen is the Patient

list; the right area of the screen is the detailed patient information for the selected stored patient archive. The following are descriptions of each field:

Patient ID: Displays the patient ID, the length of Patient ID is less than 10 characters.

Name: Displays the patient's name; the length of the name should less than 40 characters.

Gender: Displays the gender of the patient. Select Male or Female from the drop-down list.

Birth Date: Displays the patient birth date, the length of the birthday should less than 40 characters.

Height: Displays the patient's height; the length of the height should less than 10 characters.

Weight: Displays the patient's weight; the length of the weight should less than 10 characters.

Telephone: Patient's telephone number; the length of the phone number should less than 40 characters.

Address: Patient's address; the length of the address should less than 60 characters.

Allergies: Description of patient's allergy symptoms; the length of the allergy field should less than 60 characters.

Case History: Description of ECG diagnostic result; the length of words should less than 200 characters.

Functional buttons:

Add: You can add new patient's information by pressing this button.

Modify: Modify the selected patient's information from the patient list.

Delete: Delete the patient and his/her data selected from the patient list.

Back: Exit from the current screen.

Note: The Patient ID cannot be changed once saved.

4.2.2 Real Time View

On the main menu, click the icon to enter the submenu interface, refer to Fig. 4-3. In this interface, the user can view the real-time data measured by the ECG monitor and save them into the PC for reviewing and management.

1. Please connect the ECG monitor to the PC well before activating this function.

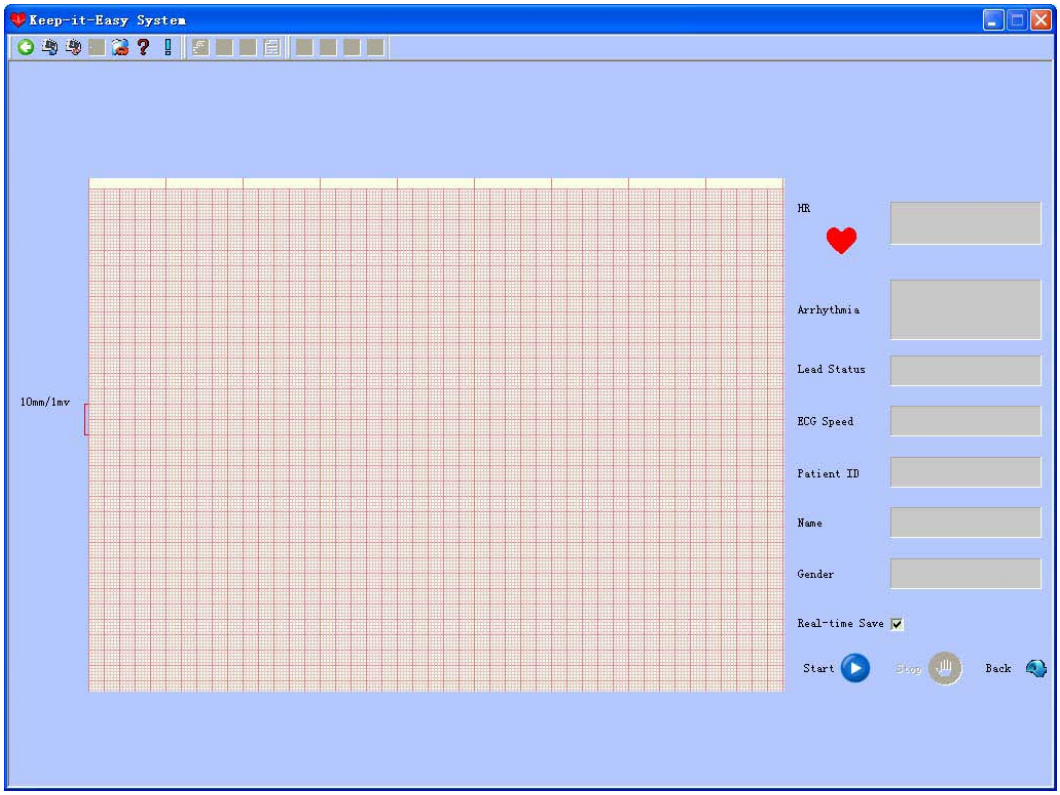

Fig. 4-3

2. To save the real-time transferred data, be sure to check the “Real-time save” check-box, or else the data will not be saved.
3. After checking the “Real-time Save” check-box, click the Start button, “Select the User” pop-up window will be displayed, refer to Fig. 4-4. Select a user that you would like to save data for.

Note: If you want to save the real-time measured data, please be sure to check the “Real-time save” box in the interface as shown in Fig. 4-4, or else, the data will not be saved.

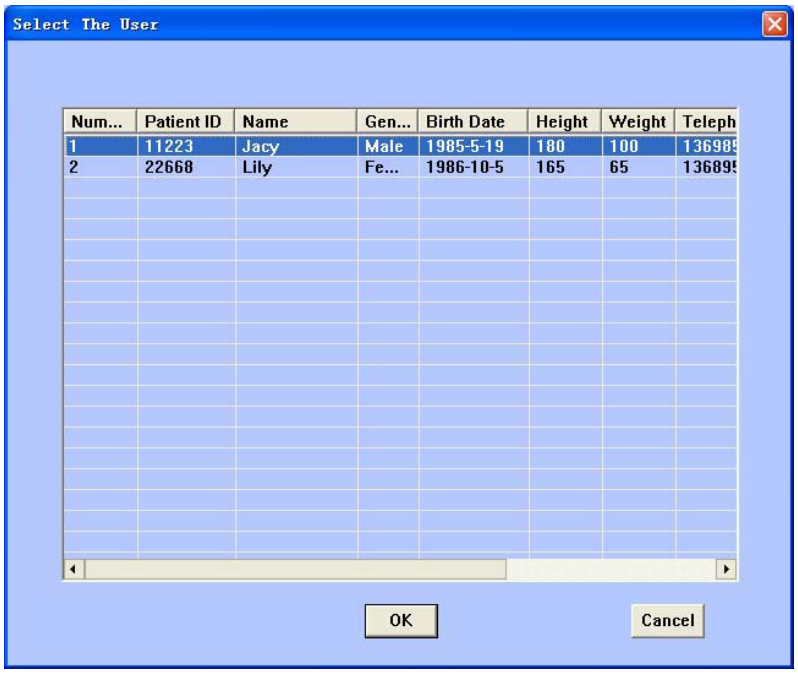

Fig.4-4

Select a patient from the table and click the “OK” button, then the data transmission will begin and the transferred data will be saved in the selected user archive. Refer to Fig.4-5.

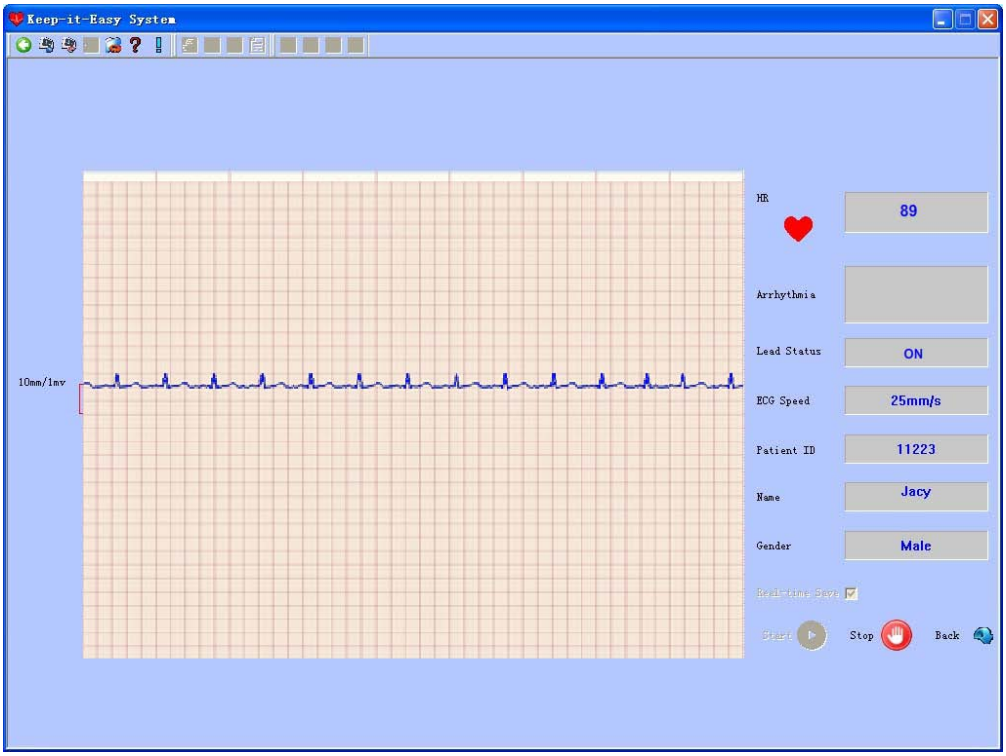

Fig.4-5

The real-time data is shown as in Fig. 4-5. “HR” is the heart rate. The area of “Arrhythmia” will display the arrhythmia analysis result if you additionally purchase the register function. “Lead Status” indicates the connection status of the current lead. “ECG Speed” is the scan speed of ECG waveform. The rest items are patient information.

Note: if you want to purchase the register function, please contact our company.

Functional buttons:

There are three functional buttons including Start, Stop and Return.

Start: Starts the real-time ECG recording and transmission from the ECG monitor to the software.

Stop: This button allows the user to terminate the real-time monitoring.

Back: Exit from the current screen.

If the real-time monitoring is interrupted because of any other reason, the system may prompt you with the following window as in Fig. 4-6. You can restart the transmission process by clicking the “Start” button after checking the connection between the ECG monitor and your PC.

Keep-it-Easy System
The Keep-it-Easy System cannot read the device. It is either turned off, in real-time measuring mode, or not connected.
OK

Fig. 4-6

4.2.3 ECG Strip View

Before performing the function, please make sure the monitor has been connected to PC with USB cable and the monitor has been activated and the power of batteries is sufficient.

Click the icon in the main interface to access its submenu interface, and then click the "Read Data" button, the software system will begin to read data from the ECG monitor. Refer to Fig. 4-7.

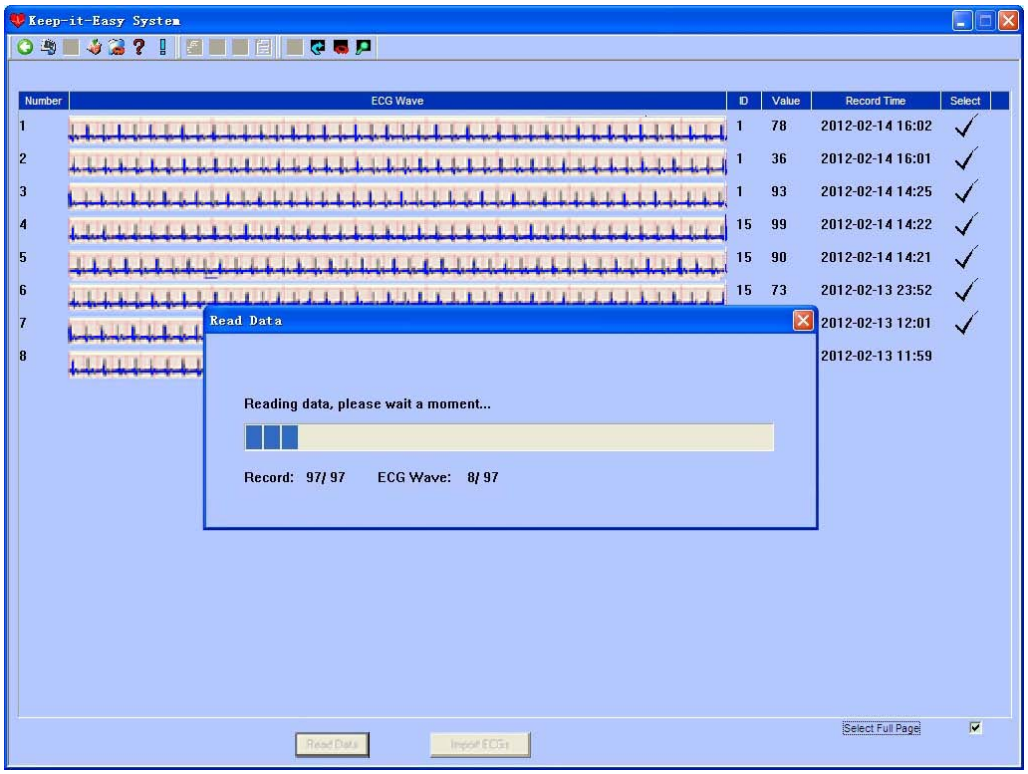

Fig. 4-7

Note: Please do not disconnect the USB cable or operate the monitor so as to keep the data transferring continually during the data transferring.

After finishing data transmission, the system may prompt that the data transmission has been finished successfully! The data that has been transferred into the software will be displayed in the left area of the interface. When the reading is finished, you can select some data item(s) and save them into archive by clicking the "Import ECGs" button. A window as shown in Fig. 4-4 will pop up; you can add new users by clicking the "Add User" button. Its

specific operations are the same as the introduction in “**4.2.1 Patient Records**”.

Note: Please make sure to save the transferred data items into the software by clicking the “Import ECGs” button, or else, the data may fail to be saved into the software when exiting from the current interface.

4.2.4 Analysis View

4.2.4.1 Data Replay

Click the “ ” icon to enter the submenu interface. And then click the “ ” icon of the toolbar which is on the top of the interface to replay ECG waveform. The interface is as shown in Fig. 4-8.

When you want to view someone’s ECG wave, select his/her archive in archives list on the right by clicking its row. And then all the ECG belonging to this user will be displayed on the left area. Every row of contractible ECG wave on the lower left displays ECG wave for 30 seconds.

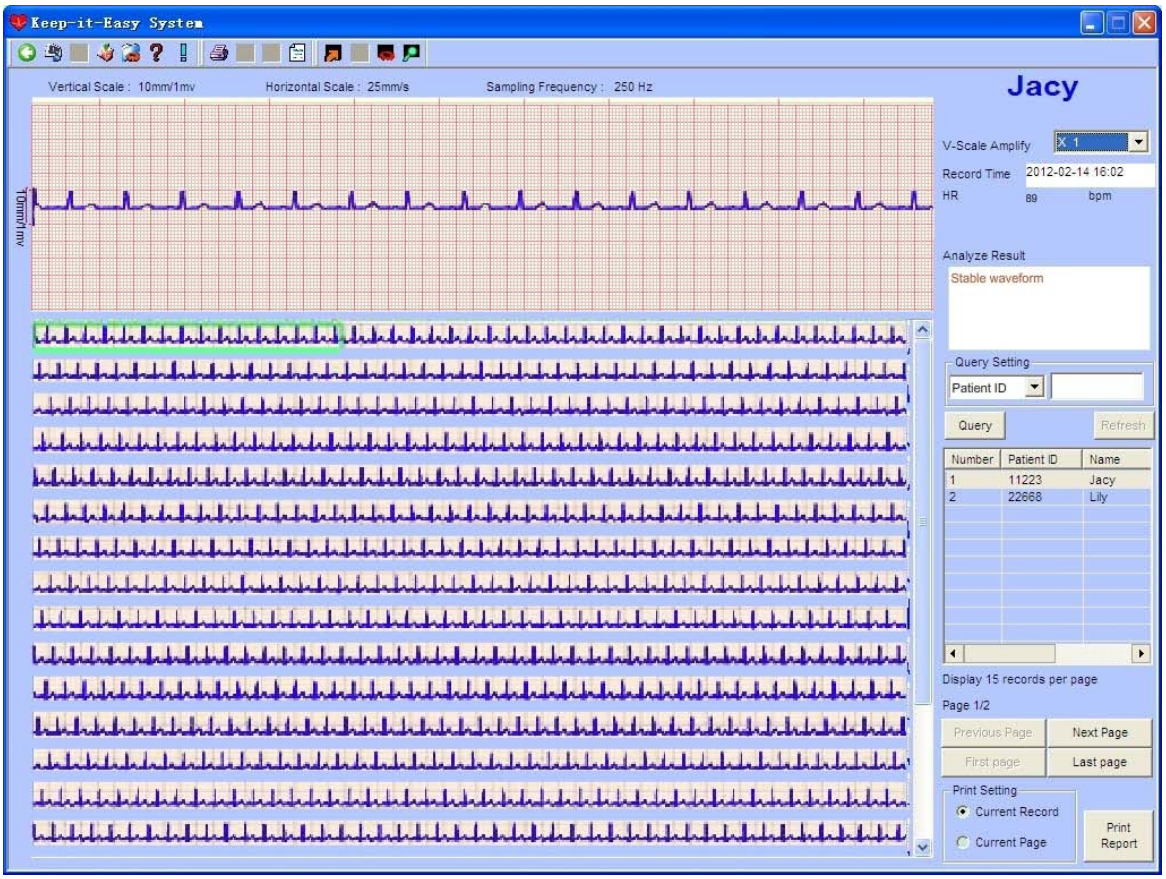

Fig. 4-8

From the interface as shown in Fig.4-8, the user may review the ECG wave measured in the continue mode. For example as in Fig.4-8, the user can use a green selecting box to

select a section of ECG wave. Shift mouse and click any dot in ECG wave can pitch on the section of ECG wave, then its amplificatory wave will be displayed on the above wave box and its corresponding record information (its heart rate value and measuring “Time” of the original record) will be shown on the right area of the interface.

V-scale Amplify: The user can review the different proportional display of the section of ECG wave by setting the display scale. By clicking the “Last Page” or the “Next Page” button, the user can view the previous or next page data items.

Additionally, measurement analysis and patient(s)’ information also may be displayed on the right area.

What’ s more, the user can print the current selected record and ECG wave or the current selected page of records and ECG wave by clicking the “Print Report” button.

4.2.4.2 Record Management

Click the “ ” icon of the toolbar to switch to the “ECG record management” interface, such as in Fig.4-9.

Select a patient archive whose data you want to view in the table on the left top of the interface, the data items belonging to this patient will appear in the table on the lower left of the interface. Refer to Fig.4-9.

You can also select a data item that you want to view from the list that located in the left area of the interface, and then the corresponding ECG wave will be displayed on the right area. Every data item displays ECG wave for 30 seconds. Refer to Fig.4-9.

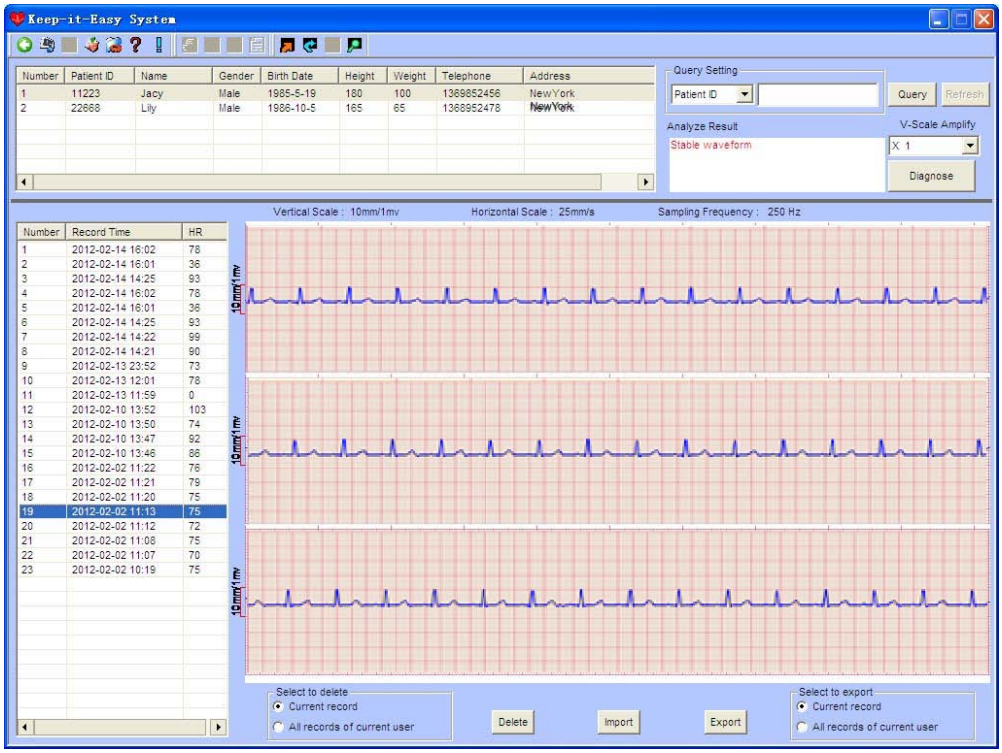

Fig.4-9

When there are too many users in the archive list, the user can use the function of “Query” to search the user archive that is needed. Two query conditions are provided by the system, Patient ID and Name. Input the correct patient ID or name into the edit-box on the right, and then click the “Query” button to search the corresponding patient.

Functional buttons:

Delete: The user can delete the current record(s) of the current user by clicking this button.

Import: By clicking this button, the user can import the record(s) that has been saved on the PC to the software for reviewing and management.

Export: By clicking this button, the user can export the current record(s) of the current user to PC with the extension of .cEcg or .bmp.

4.2.4.3 ECG waveform analysis

Click the “ ” icon of the toolbar to switch to the ECG waveform analysis interface as shown in Fig.4-10.

Fig.4-10

Description of Fig.4-10:

The patient information table is on the left side of ECG waveform. Select the target in it, and then the right will show the corresponding ECG waveform. According to these waveforms, the ECG waveform analysis will be shown above, including the results of HR, ST, PR, ORS, QT and QTC. You can also choose a specific part of the waveforms to see the analysis by clicking on the waveforms.

Functional buttons:

Print analysis: The user can print the ECG analysis results by clicking the " " icon in the toolbar.

Save analysis as picture: The user can save the analysis as picture to the PC with the extension of .bmp, .jpeg, .gif, .tiff, or .png by clicking the " " icon in the toolbar.

Email picture to: The user can email the analysis as picture to the mailbox you input by clicking the " " icon in the toolbar.

Print preview: The user can preview the ECG waveforms and analysis before printing by clicking the " " icon in the toolbar. The preview interface as shown in Fig.4-11.

Fig.4-11

4.2.5 Help

You can obtain the troubleshooting instructions and general knowledge about ECG by clicking the icon in the main menu interface.

4.2.6 Register

The arrhythmia type analysis function is optional and not included in the standard package. If you have bought the function, you need to apply a register code which is necessary to activate the arrhythmia type analysis function.

You can see the following interface in the “Version” menu of the ECG monitor. Refer to Fig.4-12. Return the SN code to our company for Register Code, then you will gain the Register Code from us.

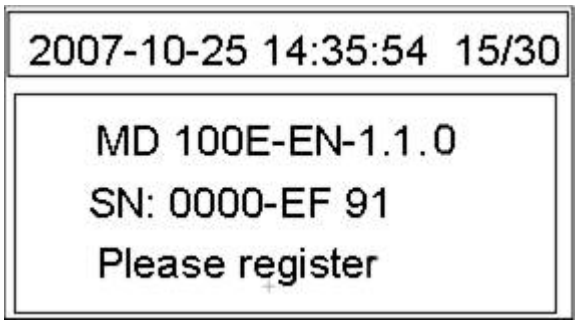

Fig. 4-12

How to activate ECG analysis function of the ECG monitor:

Access the dialog box as shown in Fig.4-13 by clicking the icon of “Register”, and input the Register Code in the editable box, then click the “OK” button.

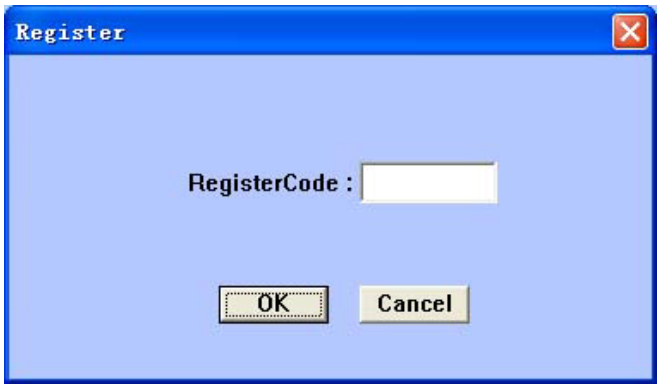

Fig. 4-13

4.2.7 About System

Click icon to access the information interface.

4.2.8 Close

Click

icon to exit from the Keep-it-Easy ECG System.

5. Uninstall

Click the “Start” menu of Windows system to find the Keep-it-Easy ECG System program group, then click the “Uninstall” item and the following prompt will appear as in Fig.5-1. Click the “Yes” button in Fig.5-1, then the uninstall will be finished.

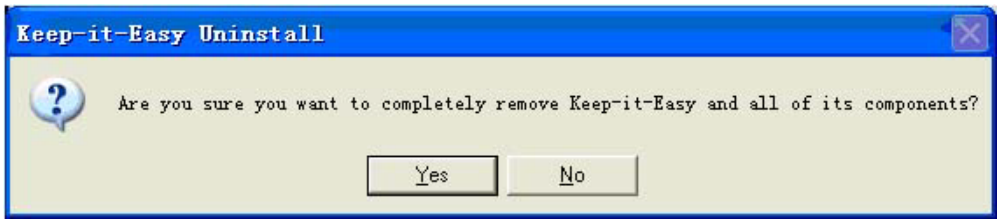

Fig. 5-1

Manufacturer address：
Beijing Choice Electronic Technology Co.，Ltd.
Bailangyuan Building B
Rm. 1127-1128， Fuxing Road, A36
100039 Beijing
PEOPLE’S REPUBLIC OF CHINA